

# CURRICULUM VITAE

MOGAM BIOTECHNOLOGY RESEARCH INSTITUTE

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September 30, 2009

## BIOGRAPHICAL

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## POSITION

Research Director, MOGAM Biotechnology Research Institute	2006 - Present
Chief Scientist	2001 - 2005
Principal Research Scientist	1994 - 2000
Senior Research Scientist	1987 - 1994
Research Scientist	1984 - 1987

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## EDUCATION

### UNDERGRADUATE

**B. S.** Department of Food Engineering, **February 1983**  
College of Engineering, Yonsei University  
Dissertation: *Rheological Characterization of the Rice Starch*

## GRADUATE

**M. S.** Department of Biological Science and Engineering      **February 1985**  
Korea Advanced Institute of Science and Technology (KAIST)  
Dissertation:  
*Enhancement of Productivity by Air-Supplement in Immobilized Cell Reactor for Ethanol Productivity*

**Ph.D.** Department of Biological Science      **February 1998**  
Korea Advanced Institute of Science and Technology (KAIST)  
Dissertation:  
*Development of perfusion culture system of recombinant CHO cells for the production of urokinase-type Plasminogen Activator*

## Reference

**Professor Jung Hoe Kim**

Department of Biological Science

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## MEMBERSHIP IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

The Korean Society for Microbiology and Biotechnology

The Korean Society for Biotechnology and bioengineering

Korean Institute of Chemical Engineers; Biochemical Engineering Division

Korean Society of Gene Therapy

Korean Society for Molecular and Cellular Biology

American Chemical Society (1993-2006)

The European Society for Animal Cell Technology

American Society of Gene Therapy

American Society for Biochemistry and Molecular Biology  
The International Society for Protein Expression

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## **HONORS AND AWARDS**

Registered in,

The Marquis' Who's Who in the World (1995-Present)

The Marquis' Who's Who in Science and Engineering

The Marquis' Who's Who in Finance and Industry

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## **FIELD OF CURRENT RESEARCH INTEREST**

Biochemical Engineering/Mammalian Cell Culture

Therapeutics for Cardiovascular Disease and Cancer

Gene Therapy: Genetic Diseases, Oncology, Vector Production Process

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## **RESEARCH RELATED ACTIVITIES**

Associate Editor: *Biotechnology and Bioprocess Engineering*

Ad hoc Review for:

*Biotechnology and Bioengineering*

*Journal of Biotechnology*

*Biotechnology Progress* (2005, 2007)

*Journal of Virological Methods*

*Journal of Gene Medicine*

*Nucleic Acids Research* (2004)

*Hepatology* (2006)

*Journal of Cancer Research and Clinical Oncology* (2006-2007)

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## PUBLICATIONS

1. *Kyuhyun Lee, Sung-Tae Yun, Young-Gun Kim, Yeup Yoon, and Eui-Cheol Jo* (2006) Adeno-associated virus-mediated expression of apolipoprotein (a) kringle suppresses hepatocellular carcinoma growth in mice. *Hepatology* 43(5): 1063-1073.
2. *Joon Young Park, Byung-Pil Lim, Kyuhyun Lee, Young-Gun Kim, Eui-Cheol Jo* (2006) Scalable production of adeno-associated virus type 2 vectors via suspension transfection. *Biotechnol. Bioeng.* 94(3): 416-430.
3. *Jung-Seob Kim, Byung-Chul Ahn, Byung-Pil Lim, Yang Do Choi and Eui-Cheol Jo* (2004) High-level scu-PA production by butyrate-treated serum-free culture of recombinant CHO cell line. *Biotechnol. Prog.* 20(6): 1788-1796.
4. *Min Tae Park, Myung Seop Lee, Sung Hyun Kim, Eui-Cheol Jo and Gyun Min Lee* (2004) Influence of culture passages on growth kinetics and adenovirus vector production for gene therapy in monolayer and suspension cultures of HEK293 cells. *Appl. Microbiol. Biotechnol.* 65(5): 553-558.
5. *Kyuhyun Lee, Young-Gun Kim and Eui-Cheol Jo* (2003) Shuttle PCR-based cloning of the infectious adeno-associated virus type 5 genome. *J. Virol. Methods* 111(2): 75-84.
6. *Jung-Seob Kim, Mi-Kyung Min and Eui-Cheol Jo* (2001) High-level expression and characterization of single chain urokinase-type Plasminogen Activator (scu-PA) produced in recombinant Chinese Hamster Ovary (CHO) cells. *Biotechnol. Bioprocess Eng.* 6(2): 117-127.
7. *Eui-Cheol Jo, Jung-Won Yun, Kyung-Hwan Jung, Soo Il Chung and Jung-Hoe Kim* (1998) Performance study of perfusion cultures for the production of single-chain urokinase-type plasminogen activator (scu-PA) in a 2.5 l spin-filter bioreactor. *Bioproess Eng.* 19:363-372.
8. *Bok-Hwan Chun, Song-Yong Park, Eui-Cheol Jo, Kyung-Hwan Jung, Dong-Il Kim and Hong Mo Moon* (1994) Effect of Serum Type on Hybridoma Growth and Monoclonal Antibody

9. **Eui-Cheol Jo, Dong-Il Kim and Hong-Mo Moon** (1993) Step-Fortifications of Nutrients in Mammalian Cell Culture. *Biotechnol. Bioeng.* 42(10): 1218-1228.
10. **Eui-Cheol Jo, Hae-Joon Park, Dong-Il Kim and Hong Mo Moon** (1993) Repeated Fed-Batch Culture of Hybridoma Cells in Nutrient-Fortified High-Density Medium. *Biotechnol. Bioeng.* 42(10): 1229-1237.
11. **Eui-Cheol Jo, Man Bock Gu, Dong-Il Kim and Sung Bok Paik** (1991) Microcarrier Culture of BOWES Melanoma Cells in Serum-Free Medium with Human Plasma Fraction IV-4+V. *Biotechnol. Bioeng.* 38: 247-253.
12. **Eui-Cheol Jo, Hae-Joon Park, Jong-Myun Park and Kyong-Ho Kim** (1990) Balanced Nutrient Fortification Enables High-Density Hybridoma Cell Culture in Batch Culture. *Biotechnol. Bioeng.* 36(7): 717-722.
13. **Bok-Hwan Chun, Hye-Sook Kim, Eui-Cheol Jo, Song-Yong Park, Dong-Il Kim and Sung-Bok Paik** (1990) Production of Human Immunodeficiency Virus from T-Lymphoblastoid Cells Using Serum-Free Medium. *Biotechnol. Lett.* 12(9): 645-648.
14. **Bok Hwan Chun, Eui-Cheol Jo and Dong-Il Kim** (1990) Effect of Glucose/Glutamine Concentrations on Hybridoma Growth and anti-HBs MAb Production in Enriched Medium. *Kor. J. Biotechnol. Bioeng.* 5(4): 365-371.
15. **Bok-Hwan Chun, Eui-Cheol Jo, Dong-Il Kim and Sung-Bok Paik** (1990) Production of Anti-Hepatitis B Surface Antigen Monoclonal Antibody in Serum-Free Medium. *Kor. J. Appl. Microbiol. Bioeng.* 18(2):175-180.
16. **Bok-Hwan Chun, Eui-Cheol Jo, Dong-Il Kim and Sung-Bok Paik** (1990) Enhancement of Hybridoma Cell Growth and anti-Hepatitis B Surface Antigen Monoclonal Antibody Production in Enriched Media with Low Serum. *Kor. J. Biotechnol. Bioeng.* 5(1):87-94.
17. **Eui-Cheol Jo, Chul Kim, Young Jun Kim and Jung-Hoe Kim** (1989) Enhancement of Productivity by Air-Supplement in Immobilized Cell Reactor for Ethanol Production. *Kor. J. Appl. Microbiol. Bioeng.* 17(2):165-169.

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## PRESENTATIONS

1. *Eui-Cheol Jo* (2009) A novel oncolytic adenovirus eliciting antiangiogenic activity for cancer virotherapy. Yonsei-KSGT Joint Symposium: Current status of gene therapy; Vector development and clinical trials. June 26, 2009, Severance Hospital, Seoul, Korea.
2. *Seong-Tae Yun, Kyuhyun Lee, Hong-Kyu Lee, Mihee Hwang, and Eui-Cheol Jo* (2008) Enhanced tumoricidal activity of oncolytic adenovirus armed with anti-angiogenic factors in NSCLC xenograft tumor model. The 65<sup>th</sup> Congress of Korean Society for Biochemistry and Molecular Biology (KSBMB), May 7-9, COEX, Seoul, Korea.
3. *Dae-Kyung Koh, Hyun Lee, Seong-Tae Yun, Kyuhyun Lee, and Eui-Cheol Jo* (2007) Novel introns for enhanced transgene expression in vivo. The 15<sup>th</sup> Congress of the European Society of Gene and Cell Therapy (ESGCT), October 27-30, 2007, De Doelen, Rotterdam, The Netherlands.
4. *Dae-Kyung Koh, Hyun Lee, Kyuhyun Lee, and Eui-Cheol Jo* (2007) New liver-specific expression system carrying novel LCR-like regulatory elements for gene therapy of hemophilia B. The 15<sup>th</sup> Congress of ESGCT, October 27-30, 2007, De Doelen, Rotterdam, The Netherlands.
5. *Kyuhyun Lee, Seong-Tae Yun, Hong-Kyu Lee, and Eui-Cheol Jo* (2007) Replication deficient adenovirus carrying apolipoprotein(a) kringles suppress tumor growth in NSCLC xenograft tumor model. Mol. Ther. 15 (Supplement 1):S201, ASGT 10th Annual Meeting May 31-June 3, 2007, Seattle, WA, USA.
6. *Dae Kyung Koh and Eui-Cheol Jo* (2007) Hematopoietic diseases and gene therapy: Session I. hemophilia; gene therapy for hemophilia. The First Workshop of Korean Society of Gene Therapy, Children's Hospital, School of Medicine, Seoul National University, April 18, 2007.
7. *Kyuhyun Lee, Seong-Tae Yun, Hong-Kyu Lee, Dae Kyung Koh, and Eui-Cheol Jo* (2006) Novel anti-angiogenic gene therapy for cancer and cancer metastasis. 2006 KSBB Seoul

Symposium: Recent advances in medical application of biotechnology, December 15, 2006, Korea University, Seoul, Korea.

8. *Kyuhyun Lee, Seong-Tae Yun, Hong-Kyu Lee, and Eui-Cheol Jo* (2006) Gene therapy for colon cancer by adeno-associated viral vector-mediated transfer of apolipoprotein (a) kringle. *Mol. Ther.* 13 (Supplement 1): S361, *ASGT 9th Annual Meeting* May 31-June 4, 2006, Baltimore Convention Center, Baltimore, MD, USA.
9. *Kyuhyun Lee, Seong-Tae Yun, and Eui-Cheol Jo* (2006) Anti-angiogenic cancer gene therapy with apolipoprotein (a) kringle genes. 2006 International Meeting of the *Microbiological Society of Korea*, S9-3, p12, EXCO, Daegu, May 4, 2006.
10. *Kyuhyun Lee, Seong-Tae Yun, and Eui-Cheol Jo* (2005) *In vivo* gene therapy with recombinant adeno-associated virus encoding apolipoprotein (a) kringle suppresses tumor growth and metastasis of colon tumor cells in mice. Annual Meeting of *Korean Society of Medical Biochemistry and Molecular Biology: New Horizons of Biomedical Science*. N-2, p235, October 26-27, Seoul KyoYuk MunHwa HoeKwan, Seoul, Korea.
11. *Kyuhyun Lee, Sung-Tae Yun and Eui-Cheol Jo* (2005) Adeno-associated virus-mediated transfer of the genes encoding cryptic kringle fragments of apolipoprotein (a) suppresses tumor growth and metastasis in vivo. *Mol. Ther.* 11 (Supplement 1): S116, *American Society of Gene Therapy 8th Annual Meeting*, June 1-5, St. Louis, MO, USA.
12. *Joon-Young Park, Kyuhyun Lee, Hong-Kyu Lee, Byoung Pil Lim, and Eui-Cheol Jo* (2005) Efficient scalable production of adeno-associated virus type 2 vectors. *Asia-Pacific Biochemical Engineering Conference (APBioChEC'05): Biochemical Engineering from Genomics to Human Well-Being*. P3-033, p241. May 15-19. Lotte Hotel Jeju, Jeju Island, Korea.
13. *Eui-Cheol Jo* (2004) Current trend and future prospect of gene therapy industry. International Symposium and Annual Meeting of *Korean Society for Biotechnology and Bioengineering*, October 13-15, Chungbuk National University, Cheongju, Korea.
14. *Kyuhyun Lee, Byoung Pil Lim, Seong-Tae Yun, and Eui-Cheol Jo* (2004) Adeno-associated virus-mediated transfer of a novel antiangiogenic agent suppresses tumor growth and

- metastasis in vivo. The 16<sup>th</sup> Annual Meeting of the *Korean Society for Molecular and Cellular Biology*, October 14-15, Seoul KyoYuk MunHwa HoeKwan, Seoul, Korea.
15. Joon-Young Park, Byoung Pil Lim, Young-Gun Kim, Kyuhyun Lee, and **Eui-Cheol Jo** (2004) Purification of vectors derived from adeno-associated virus type 2 by using column chromatography. The 16<sup>th</sup> Annual Meeting of the *Korean Society for Molecular and Cellular Biology*, October 14-15, Seoul KyoYuk MunHwa HoeKwan, Seoul, Korea.
  16. Kyuhyun Lee, Young-Gun Kim, and **Eui-Cheol Jo** (2003) Shuttle PCR-based cloning of the infectious adeno-associated virus type 5 genome. *International Biotechnology Symposium: New Challenges in the Post Genome Era 2003*, November 13-14, Yonsei University, Seoul, Korea.
  17. Joon-Young Park, Byung-Pil Lim, Doo Hong Park and **Eui-Cheol Jo** (2002) Media development for serum-free culture of HEK 293 cells. Annual Meeting of the *Korean Society for Microbiology and Biotechnology*, October 26, KonKuk University, Seoul, Korea.
  18. KyuHyun Lee, Young-Gun Kim and **Eui-Cheol Jo** (2002) Cloning of the infectious adeno-associated virus type 5 genome by shuttle PCR. The 14<sup>th</sup> 2002 Annual Meeting of the *Korean Society for Molecular and Cellular Biology*, October 17-18, KyoYuk MunHwa HoeKwan, Seoul, Korea.
  19. Myung Seop Lee, Min Tae Park, **Eui-Cheol Jo** and Gyun Min Lee (2001) Monolayer and suspension cultures of HEK 293 cells for recombinant adenovirus production for gene therapy: Effect of “cell passage number.” Spring Meeting of *Korean Society for Biotechnology and Bioengineering*. Konkuk Univ. Seoul, Korea.
  20. **Eui-Cheol Jo** (2000) Mammalian cell culture process for the production of the biopharmaceuticals. Spring Meeting of the *Korean Institute of Chemical Engineers* (KiChE), Hanyang University, Ansan, Korea.
  21. **Eui-Cheol Jo**, Kwang-Jong Kim, Kyung-Hwan Jung, Soo-Il Chung and Jung-Hoe Kim (1997) Production of urokinase-type plasminogen activator with r-CHO cells in serum-free medium. Animal Cell Technology: Basic & Applied Aspects, Proceedings of the Tenth Annual Meeting of the *Japanese Association for Animal Cell Technology*, Nagoya, Japan,



November 5-8, 1997 (eds. Y. Kitagawa, T. Matsuda, and S. Iijima) December 1998, Volume 10, 406 pp., Kluwer Academic Publishers, Dordrecht, The Netherlands.

22. *Jae-Hoon Hwang, Joo-Hyung Ahn, Eui-Cheol Jo, Kyung-Hwan Jung, Hong-Mo Moon and Kwang-Hoe Chung* (1995) Pilot scale purification of recombinant Pro-UK using expanded bed adsorption chromatography. Spring meeting of the *Korean Biochemical Society*, Seoul National University, Korea.
23. Joong-Chul Lee, Sung-Jin Kim, **Eui-Cheol Jo**, Dong-Il Kim, Kyung-Hwan Jung and Hong-Mo Moon (1992) Production of Hepatitis B surface antigen including PreS (preS-HBsAg) in fed-batch culture of recombinant yeast. *Proceedings of Asia-Pacific Biochemical Engineering Conference (APBioChEC '92)*, pp. 186-188. Yokohama (April 12 - 15), Japan.
24. **Eui-Cheol Jo** and Dong-Il Kim (1991) Fed-Batch Hybridoma Cell Culture by Nutrient-Fortification. Annual Meeting of the *Korean Society of Biotechnology and Bioengineering*, Yonsei University, Seoul, May 4.
25. **Eui-Cheol Jo**, Hae-Joon Park, Jong-Myun Park and Kyong-Ho Kim (1990) A Nutrient Fortification Approach to the Growth Limitations of Cultured Mammalian Cells. *Proceedings of Asia-Pacific Biochemical Engineering Conference (APBioChEC '90)*, pp. 145-148, Seoul, Korea.
26. Jung Chul Lee, Man Bock Gu, **Eui-Cheol Jo** and Dong-Il Kim (1990) Production of Hepatitis B Surface Antigen from Continuous Cultures of Recombinant *Saccharomyces cerevisiae*. The 35th Annual Meeting of the *Korean Society for Applied Microbiology*.
27. **Eui-Cheol Jo**, Hae-Joon Park, Jong-Myun Park and Kyong-Ho Kim (1988) High-Density Hybridoma Cell Culture through Medium Modification in Batch. Presented at the Symposium on Industrial Applications of Biotechnology. In: *Recent Progress in Molecular Biology & Genetic Engineering in Korea, Mol. Biol. Genet.* 3(2): 285-294, October 1988.
28. **Eui-Cheol Jo**, Hae-Joon Park, Jong-Myun Park and Kyong-Ho Kim (1988) High-Density Hybridoma Cell Culture through Medium Modification in Batch. Presented at the Symposium on Industrial Applications of Mammalian Cell Culture. Joint Meeting of the *Korean Society of Biotechnology and Bioengineering*, and the *Korean Institute of Chemical*

*Engineers.*

29. ***Eui-Cheol Jo, Man Bock Gu and Kyong-Ho Kim*** (1987) Microcarrier Culture of BOWES Melanoma Cells in Serum-Free Medium with Human Plasma Fraction IV-4+V. The 32nd Annual Meeting of *the Korean Society for Applied Microbiology*, Jeju University, Jeju, Korea.
  30. ***Eui-Cheol Jo, Chul Kim, Young Joon Kim and Jung-Hoe Kim*** (1984) Enhancement of Productivity by Air-Supplement in Immobilized Cell Reactor for Ethanol Production. The 29th Annual Meeting of *the Korean Society for Applied Microbiology*.
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## **PATENTS**

An inventor of ten individual domestic and foreign patents. I do not list these patents in detail, on a belief that patent listing hardly influences the instant patent application.